



Aviation Hazard Protection with F-500 EA®





EXPLORING

AVIATION FIRE RISKS

Aviation fire hazards are growing more complex every year. Ensuring the safety of passengers is top of mind as contemporary synthetic materials that emit flammable, explosive, and toxic gases become commonplace. Flight teams are in need of a fluorine free fire suppression solution capable of handling today's high hazards, providing peace of mind for the general public, employees, and first responders.

According to the FAA, approximately 70% of their recorded lithium-ion battery fires are passenger related.

ENCAPSULATOR AGENTS ARE NOW INCLUDED IN FAA AC 150/5210-6E

"Encapsulator Agents change the chemical make-up of a water droplet with the introduction of Spherical Micelles to neutralize the fuel."

FIRE HAZARDS CAN BE FOUND IN MULTIPLE LOCATIONS AS THE AVIATION INDUSTRY EMBRACES NEW TECHNOLOGY

NFPA 18A recognized Encapsulator Technology offers comprehensive protection against all aviation hazards, including multi-class and three-dimensional fires, to preserve life.

Hazard Control Technologies, Inc.

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AIRCRAFTS



AIRPORTS



CAR PARKS



HANGARS



RENTALS



RUNWAYS

EXPLORING

PARKING

Airport parking structures house vehicles containing synthetic materials, mixed fuels, lightweight metals, and lithium-ion batteries.



Most major airports accommodate several thousand parked vehicles daily.

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EXPLORING

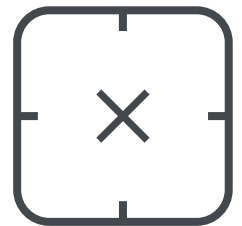
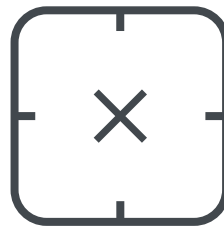
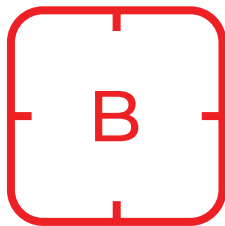
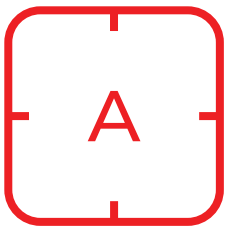
MILSPEC ALTERNATIVES

Encapsulator Agents are versatile, safely mitigating a vast range of hazards. They excel at both fire suppression and spill control while remaining fluorine free, noncorrosive, and biodegradable.

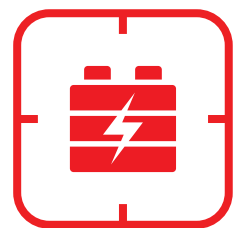
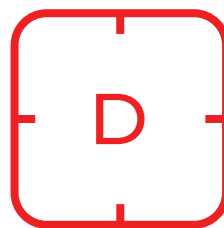
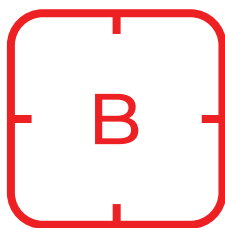
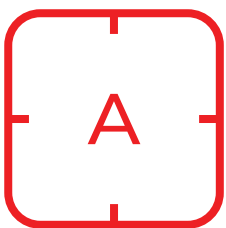
WHAT SETS F-500 EA® APART?

F-500 EA® is backed by over fifteen years of third-party testing on high hazards, like lithium-ion batteries, with a low viscosity of 75 cP to prevent line blockages.

FLUORINE FREE FOAMS



ENCAPSULATOR AGENTS



LITHIUM-ION BATTERIES

3%

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STANDARDS & INCLUSIONS



NFPA 409

New risk-based solutions are accepted in the 2022 edition of NFPA 409. This revision allows for the use of innovative fire suppression agents, such as UL listed Encapsulator Agents, for advanced aircraft hangar protection with multi-class capabilities.

AC 150/5210-6E

This FAA Advisory Circular includes Encapsulator Agents. Protect passengers, flight teams, aircrafts, car parks, hangars, and more with one eco-friendly agent. Turkey is already utilizing F-500 EA® in 48 airports.



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EXPLORING

LITHIUM-ION BATTERY RISKS

Lithium-ion batteries release over 100 flammable, explosive, and toxic off-gases as they burn. F-500 EA® can reduce the concentration of harmful vapors and save lives. This is essential in enclosed aviation environments.

MEASURING HYDROGEN (H2)

A study performed by Beijing Institute of Technology in 2022 sheds light on the advantages of dosing F-500 EA® concentrate into a sprinkler system for advanced battery hazard protection.

Out of the various off-gases detected, H2 made up 69.79%.

CO2, C2H4, CH4, and CO made up the remaining 30.21%.

AGENT TYPE

H2 (PPM)

<i>NO AGENT</i>		476 PPM
<i>WATER MIST</i>		217 PPM
<i>F-500 EA</i>		14 PPM

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CHINA AIRLINES

FLIGHT 120 FIRE

On August 20, 2007, a devastating fire broke out following an explosion on China Airlines Flight 120 shortly after landing at Naha airport. All 157 passengers evacuated safely. The fire took 2 hours to extinguish.

CAAC



Boeing 737 Case Study

The Civil Aviation Administration Of China (CAAC) set out to simulate this fire with the following materials:

AVGAS	3 TONS
TIRES	500
WOOD	12 CUBIC METERS

Result

After a 4-minute preburn, the 3% F-500 Encapsulator Agent (F-500 EA) solution was applied utilizing two 500 l/min nozzles. The fire was extinguished after just 7 minutes.

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